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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,713	07/22/2003	Paul G. Duncan	37724.011900CON	4935
22191	7590	02/07/2008		
GREENBERG TRAURIG, LLP 1750 TYSONS BOULEVARD, 12TH FLOOR MCLEAN, VA 22102			EXAMINER BARAN, MARY C	
			ART UNIT 2857	PAPER NUMBER
			NOTIFICATION DATE 02/07/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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T/H

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/623,713	DUNCAN ET AL.	
	Examiner	Art Unit	
	MARY C. BARAN	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 5-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The action is responsive to the request for continued examination filed on 1 November 2007. Claims 1 and 5-17 are pending. Claims 2-4 are cancelled.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-9, 11, 12, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney (U.S. Patent No. 5,473,322) in view of Smith (U.S. Patent No. 5,950,140).

Referring to claim 1, Carney teaches a remote sensing unit (see Carney, column 7 lines 53-65), comprising:

at least one sensor, for measuring various aspects of the environment in proximity to a sensing unit (see Carney, column 4 lines 40-43);

at least one signal processor, for processing measurements from said at least one sensor (see Carney, column 6 lines 1-7 and lines 42-51);

a two-way telemetry function, for sending data to and receiving data from a host terminal (see Carney, column 7 lines 53-65);

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a tamper detection system for determining when said remote sensing unit has been opened (see Carney, column 4 lines 46-48 and column 2 lines 19-25);

at least one controller, for storing results from said at least one signal processor, controlling power availability to selected devices associated with said remote sensing unit, and for processing data from said host terminal (see Carney, column 6 lines 1-7); and

at least one power supply, for distributing controlled power to selected devices associated with said remote sensing unit (see Carney, column 5 lines 10-22), but does not expressly teach minimizing power used by said remote sensing unit.

Smith teaches minimizing power used by said remote sensing unit (see Smith, column 3 lines 50-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carney to include the teachings of Smith because minimizing the power used by the remote sensing unit would have allowed the skilled artisan to maximize the battery life of the remote unit.

Referring to claim 6, Carney teaches that at least one controller includes a microprocessor (see Carney, column 6 lines 1-7).

Referring to claim 7, Carney teaches that at least one controller can control power distribution from said one or more power supplies to other remote sensing unit components (see Carney, column 5 lines 10-22).

Referring to claim 8, Carney teaches that at least one power supply receives traditional electrical power (see Carney, column 5 lines 10-22).

Referring to claim 9, Carney teaches that at least one power supply receives power from an alternative energy source (see Carney, column 7 lines 7-15).

Referring to claim 11, Carney teaches that two-way telemetry function is comprised of plain old telephone service (see Carney, column 7 lines 53-57).

Referring to claim 12, Carney teaches that two-way telemetry function is comprised of a wireless, point to point radio frequency interface (see Carney, column 7 lines 57-61).

Referring to claim 16, Carney teaches a remote sensing method (see Carney, column 7 lines 53-65), comprising the steps of:

controlling power available to selected remote sensing unit components (see Carney, column 5 lines 10-22);

measuring at least one aspect of the environment in proximity to said remote sensing unit (see Carney, column 4 lines 40-43);

processing and storing said at least one measured aspect as data (see Carney, column 6 lines 1-7); and

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transmitting said data to a host terminal (see Carney, column 7 lines 53-65), but does not expressly teach minimizing power used by said remote sensing unit.

Smith teaches minimizing power used by said remote sensing unit (see Smith, column 3 lines 50-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carney to include the teachings of Smith because minimizing the power used by the remote sensing unit would have allowed the skilled artisan to maximize the battery life of the remote unit.

Referring to claim 17, Carney teaches defining appropriate intervals during which said controlled power is available to said remote sensing unit components based on control information received from said host terminal (see Carney, column 6 line 58 – column 7 line 6).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carney (U.S. Patent No. 5,473,322) in view of Smith (U.S. Patent No. 5,950,140) and in further view of Kraus et al. (U.S. Patent No. 5,734,098) (hereinafter Kraus).

Referring to claim 5, Carney and Smith teach all the features of the claimed invention except that said sensor includes a biocide to retard or eliminate biofouling.

Kraus teaches that said sensor includes a biocide to retard or eliminate biofouling (see Kraus, column 15 lines 21-31).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Carney and Smith to include the teachings of Kraus, because including a biocide to reduce biofouling would have allowed the skilled artisan to achieve efficient, profitable and safe operation (see Kraus, column 1 lines 9-14).

4. Claims 10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney (U.S. Patent No. 5,473,322) in view of Smith (U.S. Patent No. 5,950,140) and in further view of Gaukel (U.S. Patent No. 6,072,396).

Referring to claim 10, Carney and Smith teach all the features of the claimed invention except that said two-way telemetry function includes one or more cellular telephone interfaces.

Gaukel teaches that said two-way telemetry function includes one or more cellular telephone interfaces (see Gaukel, column 7 lines 35-38).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Carney and Smith to include the teachings of Gaukel because utilizing cellular telephone interfaces would have allowed the skilled artisan to accommodate greater communication traffic (see Gaukel, column 7 lines 63-65).

Referring to claim 13, Carney and Smith teach all the features of the claimed invention except that said two-way telemetry function is comprised of a wireless satellite interface.

Gaukel teaches that said two-way telemetry function is comprised of a wireless satellite interface (see Gaukel, column 7 lines 39-42).

It would have been obvious at the time the invention was made to modify Carney and Smith to include the teachings of Gaukel because utilizing a wireless satellite interface would have allowed the skilled artisan to accurately determine position (see Gaukel, column 7 lines 39-43).

Referring to claim 14, Carney and Smith teach all the features of the claimed invention except a position determination device.

Gaukel teaches a position determination device (see Gaukel, column 7 lines 35-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carney and Smith to include the teachings of Gaukel because having a position determination device would have allowed the skilled artisan to determine and store location data (see Gaukel, column 3 lines 57-59).

Referring to claims 15, Carney and Smith teach all the features of the claimed invention except that said position determination device is a global positioning system.

Gaukel teaches that said position determination device is a global positioning system (see Gaukel, column 7 lines 35-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carney and Smith to include the teachings of Gaukel



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because having a global positioning system would have allowed the skilled artisan to determine and store location data (see Gaukel, column 3 lines 57-59).

### ***Response to Arguments***

5. Applicant's arguments filed 21 November 2007 have been fully considered but they are not persuasive.

Applicant argues that Carney does not teach "measuring various aspects of the environment in proximity to a sensing unit"; however, Applicant's arguments are not well taken. Carney teaches sensing the movement or orientation (i.e. environmental condition) of the meter, via a tilt switch which is surface mounted on the circuit board inside the meter (i.e. within the proximity of the sensing unit). Therefore Carney teaches measuring various aspects of the environment in proximity to a sensing unit (see Carney, column 4 lines 40-43).

Applicant further argues that Carney does not teach "sending data"; however, Applicant's arguments are not well taken. Carney teaches control and data conductivity using an RF receiver/transmitter (i.e. sending data) and an antenna. Therefore, Carney teaches sending data (see Carney, column 7 lines 53-65).

Applicant further argues that Carney does not teach "a tamper detection system for determining when said remote sensing unit has been opened"; however, Applicant's arguments are not well taken. Carney teaches a tamper detection system which uses a tilt switch to determine if tampering has occurred. The tilt switches are used to determine common forms of tampering, such as unauthorized entering into or

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movement. Therefore, Carney teaches a tamper detection system for determining when said remote sensing unit has been opened ((see Carney, column 4 lines 46-48 and column 2 lines 19-25).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY C. BARAN whose telephone number is (571)272-2211. The examiner can normally be reached on Monday to Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Mary Catherine Baran  
3 February 2008

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